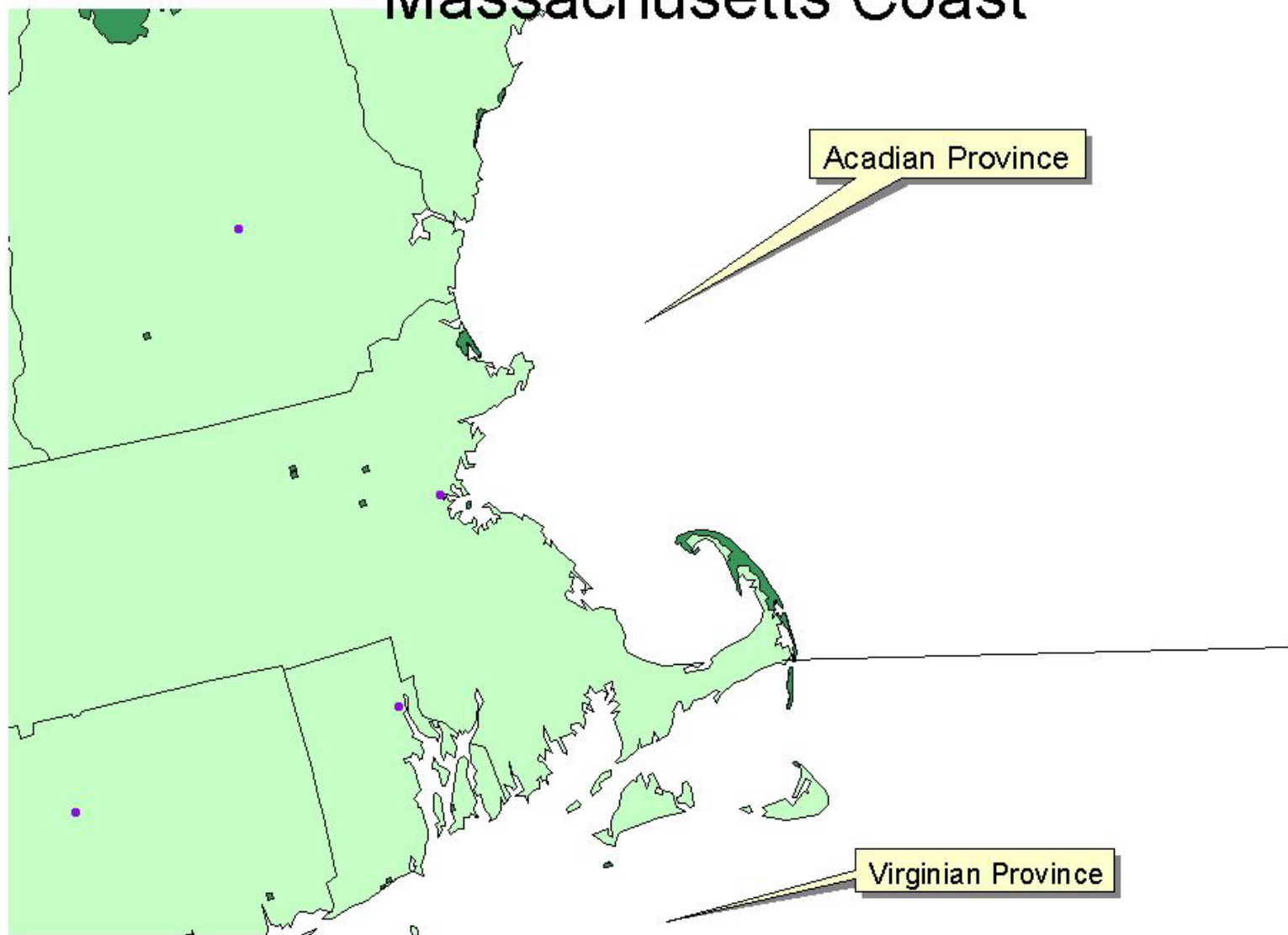




Marine Invertebrates of Massachusetts

Robert Buchsbaum
Massachusetts Audubon Society

Biogeographic Regions of the Massachusetts Coast



Importance

- Shellfish industry – worth \$123 million in 1985
- Fundamental in marine food web
 - Migratory Shorebirds
 - Fish
- Environmental Indicators of Pollution
- Ecotourism
 - Tidepooling
 - Marine life cruises
- Research

Prominent Groups of Marine Invertebrates of New England

- Sponges
- Jellyfish, Anemones
- Bryozoans
- Mollusks
- Crustaceans
- Worms
- Echinoderms
- Tunicates



Types of Feeding Habits

- Suspension Feeding
- Deposit feeding
- Active predators
- Active herbivores

Mollusks

Snails - Gastropods



New England Neptune
State Mollusk of Massachusetts

Bivalves



Quahog

Cephalopods –
Squids, etc



The “Big 4”

Inshore Commercial Bivalves

- Quahogs
- Soft shell Clam
- American Oysters
- Bay Scallops

Northern Quahog - *Mercenaria mercenaria*



Also called:
Hard clam
Little Neck
Cherrystone
Chowder

Major commercial and
recreational species on
Cape Cod and SE Mass



Soft shell Clam – *Mya arenaria*



Most important commercial species north of Boston.

Also called:
Long neck clam
Steamer

Bay Scallop – *Argopecten irradians*



Cape Cod and Islands

Only live two years
Associated with eelgrass

American Oyster – *Crassostrea virginiana*



Cape Cod – particularly Wellfleet

Aquaculture
and seeding

Other Commercial Mollusks



Whelks (Conchs)



Razor Clam



Blue Mussels



Surf Clam

+ Mahogany Clam

Substrate Types – Hard Bottom



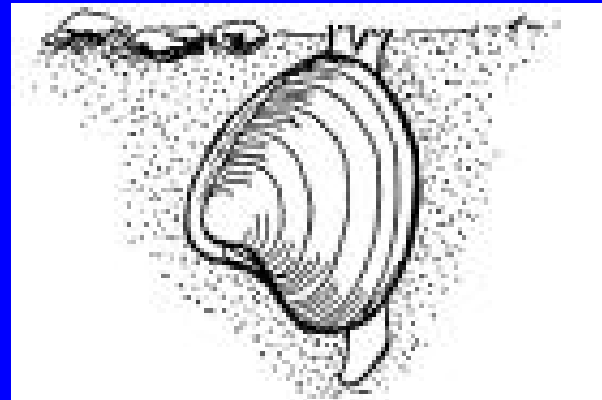
Substrate Types – Soft Bottom



Worm Tubes



Mud
Snails



Clams

Biogenic Habitats - Sponges



Filter
feeders

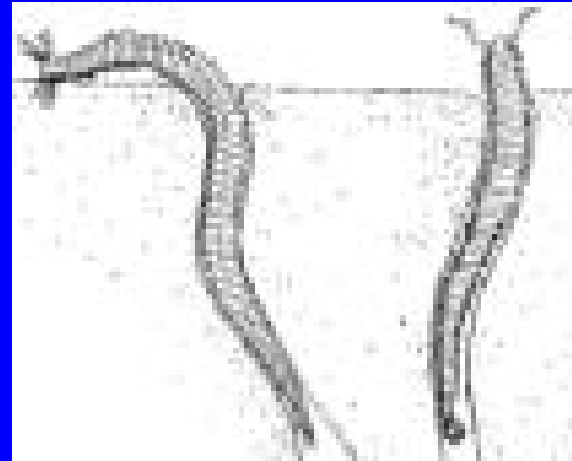
Can form
own
habitats

Research
on
natural
products

Polychaetes



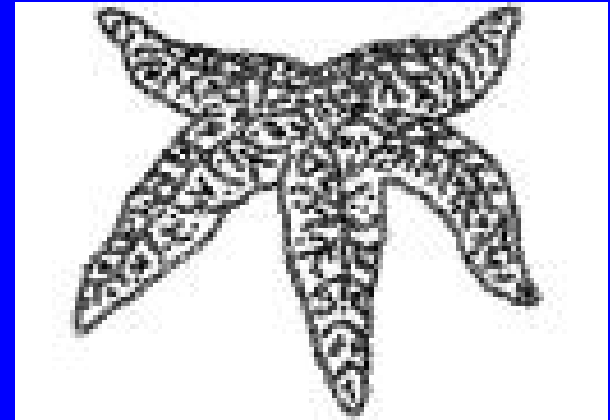
Clam Worm -
predator



A suspension
feeder

Echinoderms

- Different groups include
 - Sea Stars
 - Brittle Stars
 - Sea Urchins and Sand Dollars
 - Sea Cucumbers
- Often key structuring component of marine ecosystems
 - Predators
 - Herbivores



Marine Invertebrate Management Issues

- Invasive Species
- Shellfish Management
- Siting of Aquaculture
- Pollution



Invasive Species



Asian Shore Crab



Striped Anemone



Pacific Colonial Tunicate



European (Common)
Periwinkle